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ABSTRACT

Recent research indicates that typical writing assignments given to advanced students of English as a second language do not prepare them for university level writing. However, the technique of information transfer, which involves presentation of a visual stimulus to prompt writing, can be used effectively to practice the skills most university-level writing requires--restatement and reorganization of a given body of material. Information transfer may be used to teach the various types of academic discourse commonly encountered by college students: process descriptions, narration, physical description, comparison and contrast, categorizing and listing, cause and effect, and generalizing from numerical data. When using this technique, teachers should always present the visual stimulus to the class in a series of instructional moves paralleling those leading up to a writing assignment in a content course. Six sample visuals are included. (ARH)

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INFORMATION TRANSFER IN THE ACADEMIC WRITING CLASS[1]

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I. Introduction

There are several different ways in which writing tasks may be set for students in the ESL composition class. One traditional approach is to provide students with a series of written models, usually a paragraph or longer, which they analyze from rhetorical and/or linguistic points of view, and then attempt to emulate in their own writing. This approach comes directly from the English rhetoric tradition, where exemplary pieces of literature are studied and then serve as springboards for student essays. The models offered in ESL composition texts do not often provide the stylistic quality of a Hemingway or Stephen Crane, concerned as they often are with correct tense use or appropriate connecting words. The basic pedagogical intent, however, is the same.

A recent and currently popular alternative to the modeling approach has been to permit students to rely on their own knowledge and experience as the source of ideas for composition. A trivial version of this is the perennial first assignment of September, "What I did over my summer vacation." But more sophisticated self-expressive tasks as journal writing and responding to essay questions like "Describe the most serious problem your country currently faces, and suggest a possible solution" also fall into this category. The focus of this kind of writing task is often more on "getting the message across", rather than on formal organization or sentence level accuracy. Under this approach students also learn to become conscious of the processes which they use to

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compose. This approach is said to "help student writers discover what they mean through the act of writing." At their best, these kinds of writing tasks provide a threat-free, non-interventionist atmosphere for learners to gain confidence in their writing skills. However, student-centered, process-oriented writing has little in common with the kinds of writing tasks typically encountered in university courses.

Recently several authors have called upon ESL composition teachers to examine more closely the kinds of writing tasks actually required of students in their content courses (Horowitz, 1986; Shih, 1986; Swales, 1987). They challenge us to adjust our academic writing classes so that the writing activities we provide for our students replicate the cognitive style, if not the content, of "real world" writing assignments in the university. These authors argue that most writing actually assigned to college students cannot be adequately prepared for simply by practicing paragraph patterns, relying on students' own store of personal knowledge and experience, or by concentrating on prewriting, drafting and revision processes. What most writing assignments actually ask students to do (according to surveys conducted by Horowitz and Bridgemean & Carlson, 1984), is to gather information previously encountered in print or in lectures, synthesize it, and then restate it using the accepted conventions of academic English. We may label this third alternative, the "recall-reorganize-restate" approach. Professors frequently ask students, for example, to summarize a source reading, or to integrate several sources into a short paper. Or student may be asked an essay question which requires them to apply a theory previously studied to solve a practical problem.

These kinds of tasks require little of the student in the way of invention or discovery. Rather, they call for the restatement and reorganization of a

given body of learned material. If the published surveys of college writing do in fact reflect the reality of college composition assignments, it would seem that at least some, if not most, of the writing tasks we set for students in the composition class should replicate this type of cognitive activity.

In this presentation I want to describe how the technique of information transfer can be used in the ESL academic writing class to simulate and practice this kind of writing task effectively and efficiently. Information transfer simply means the shifting of information from one modality to another. Here I use the term to refer to the transposing of graphic material into written form.

The use of visual stimuli to prompt writing is particularly appropriate to the EAP composition class for the reasons hinted at above. First, graphics present to the viewer a restricted body of given information, delimiting a specific semantic/lexical base, thus avoiding the necessity for students to invent or discover ideas. Secondly, because the material presented in the stimulus is primarily pictorial (rather than verbal), the writer is forced to impose some kind of rhetorical organization upon the raw data and to recast it in acceptable academic language. Data presented in this way usually suggests a topic, but leaves the construction of a full-blown thesis statement, and its subsequent development, to the student. This is precisely the type of cognitive task imposed on a student writer by typical content-course writing assignments.

Information transfer actually represents a kind of short-cut version of the typical academic writing assignment. Here the informational content, rather than searched out by the student and studied over a period of weeks, is presented in class in an efficient, pre-packaged visual form. The rest of the process (selecting, organizing and recasting the information) is pretty nearly the same in the simulation as in actual assignments. Writing exercises based on

well-chosen graphic stimuli can thus help university students practice not only the linguistic and rhetorical conventions of academic English, but the information processing tasks implicit in most college writing assignments as well.

II. Information Transfer and Types of Academic Discourse

Information transfer has long been a staple technique in basic ESL writing instruction. Let us turn now to some of the discourse types common to academic writing and see how far we can extend the technique to cover the range of writing tasks commonly encountered by college students.

Process: Process descriptions, whether of natural or humanly created process, figure heavily in the writing tasks assigned to students in fields of science and engineering. Natural cycles are particularly appropriate exercises for the life sciences (see Figure 1), while physical occurrences which combine human activity and naturally occurring phenomena can be targeted to the physical sciences. In either case, the organization of data may be presented in clear step-wise fashion, or globally/simultaneously, thus creating a more cognitively difficult writing task (one must determine where to begin and how to select out and organize the remaining information).

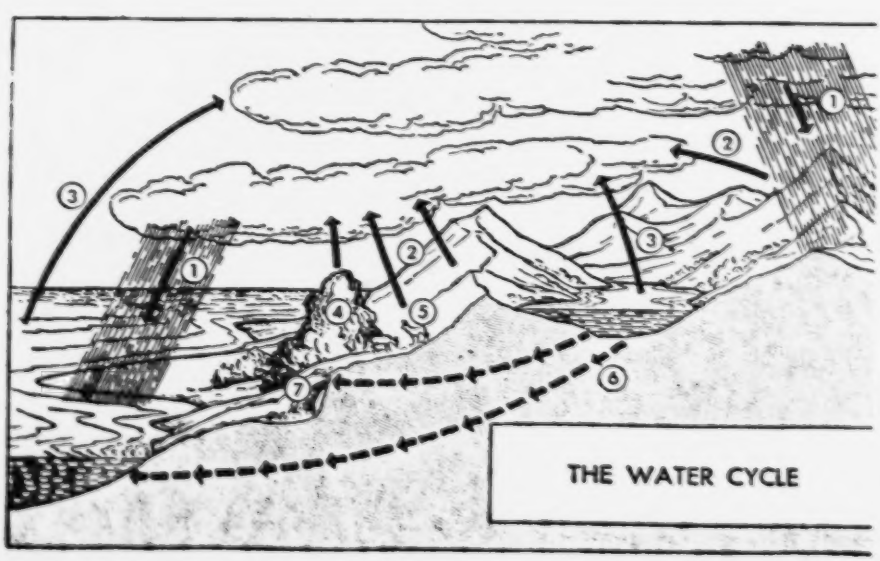
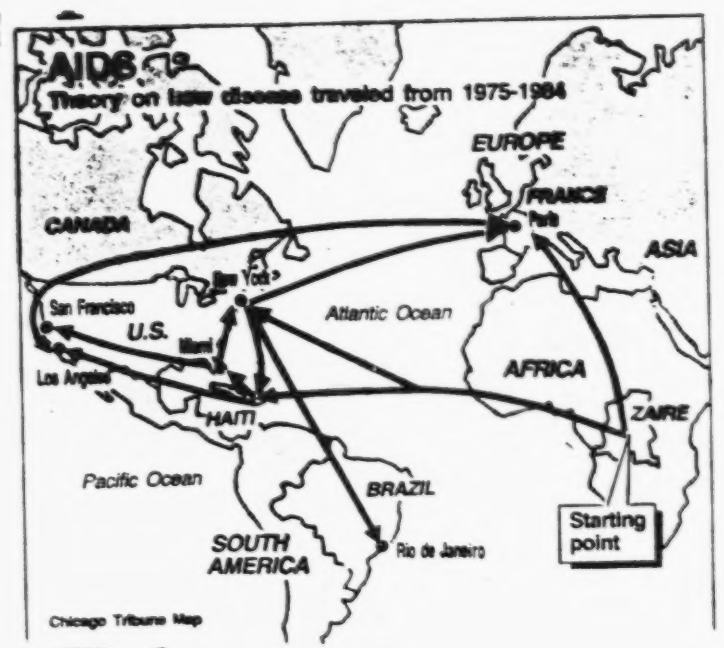


Figure 1.

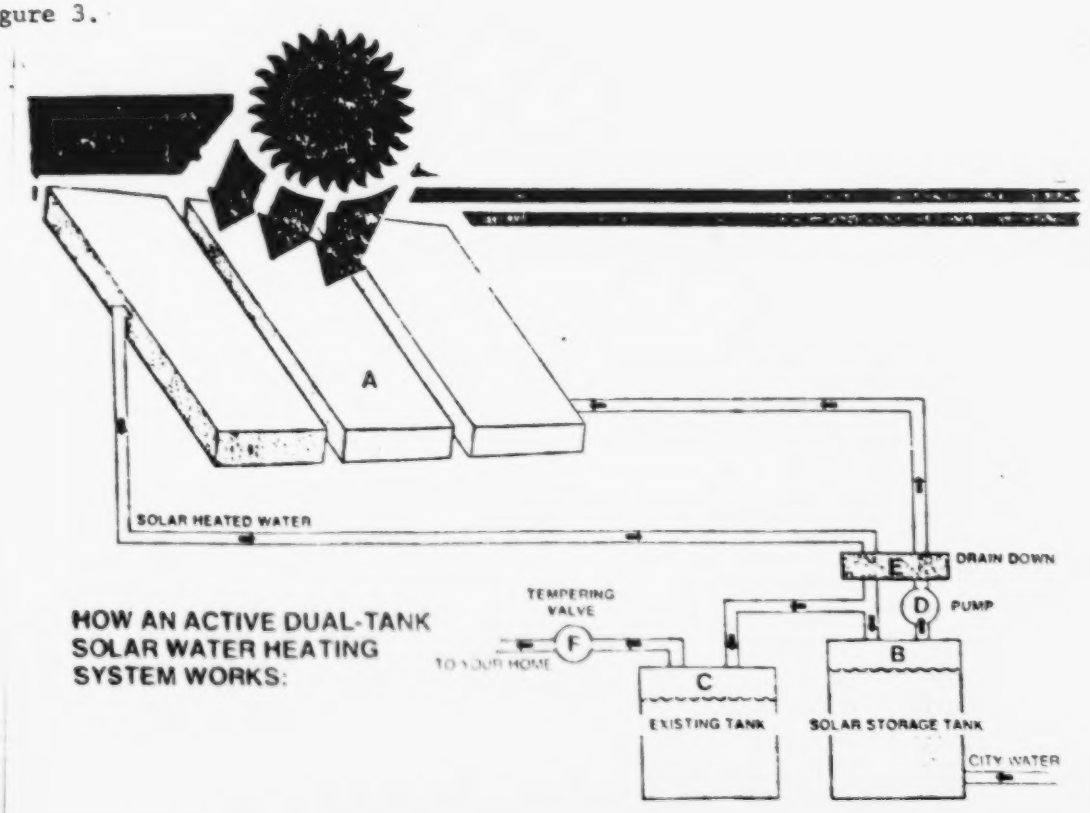
Narration: Narration tasks are not as likely to be encountered by student writers as other types of discourse, except in courses dealing with historical development. For students preparing for fields of study where such course are likely, relevant information can be transfered from maps and historical atlases (see Figure 2).

Figure 2.



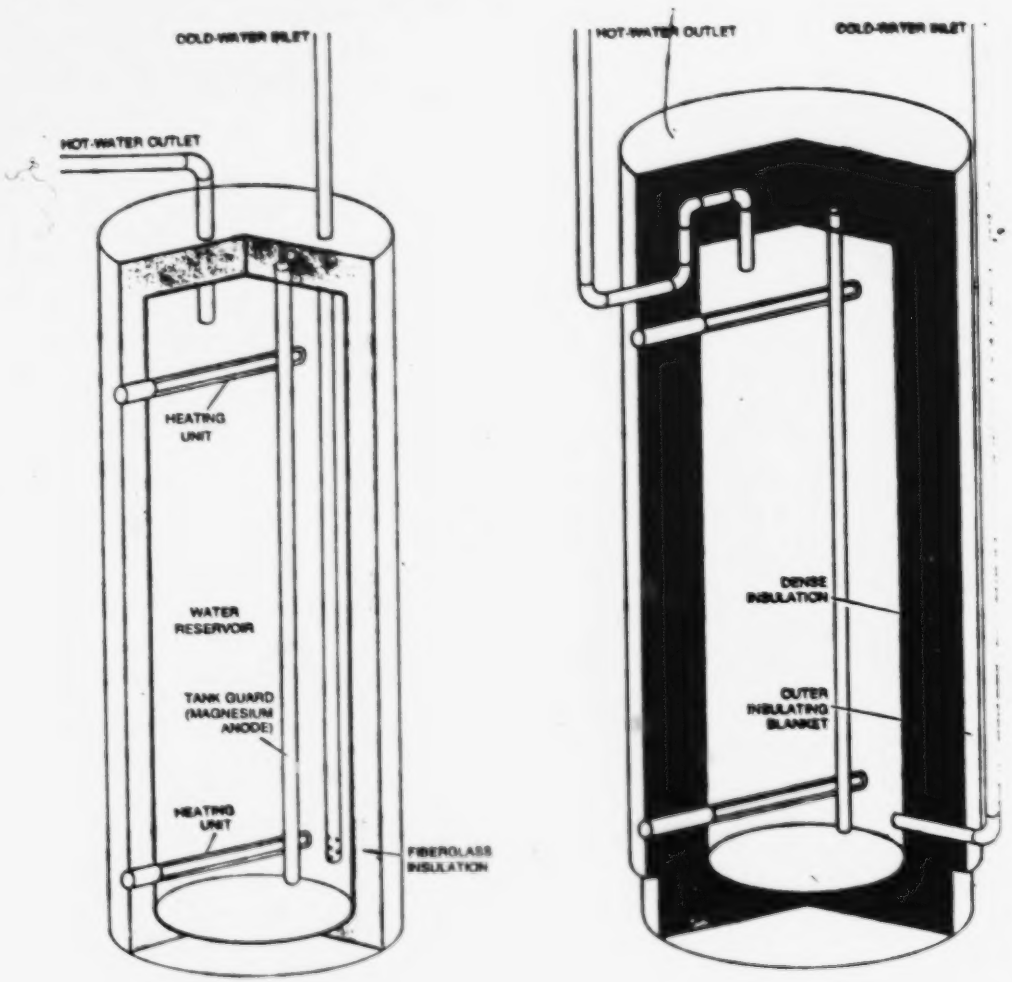
Physical Description: Defining and describing physical objects is (like process description) common to the natural and physical sciences and engineering. Here the graphic can provide a holistic view of the object and may also provide labels for its component parts (see Figure 3). The writer must provide a structure for the description of the apparatus (although even this is often suggested by the illustration) and a functional explanation for each of its parts. A really comprehensive text would also describe how the various components interact with one another to accomplish an overriding purpose. In business or educational administration the "object" to be described may be an institutional structure as portrayed graphically by an organizational chart. The informaton procesing task that the student writer must carry out here is essentially the same as that involved in transfering the information from a picture of an apparatus.

Figure 3.



Comparison and Contrast: This line of argumentation runs through virtually all academic disciplines, from the hard sciences to the humanities. Examples may be found in engineering and biology. These are really extensions of simple description, although here the integration of 2 (or more) descriptions poses special problems of organization for the writer to solve (see Figure 4).

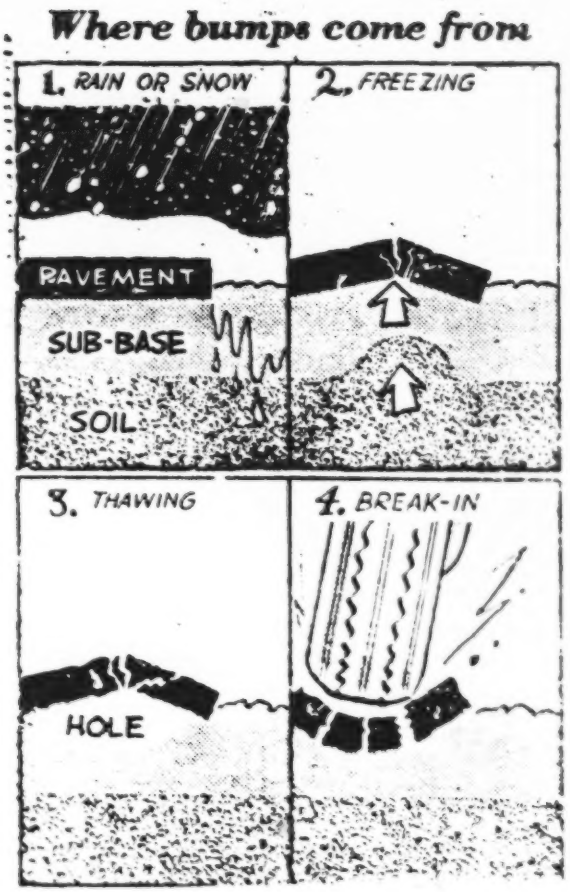
Figure 4.



Categorizing and Listing: This rhetorical mode may be the most basic of all in academic writing. Enumerations and taxonomies form some of the earliest of written records. All disciplines establish categories to manage the array of observable data in which they are interested. Once established, the categories are filled in with lists of individual items (e.g., species, substances, concepts, behaviors) which seem to belong together. Much academic writing is concerned with identifying sets and listing members or examples of each set. Visuals are easily adapted to practice this mode of expession.

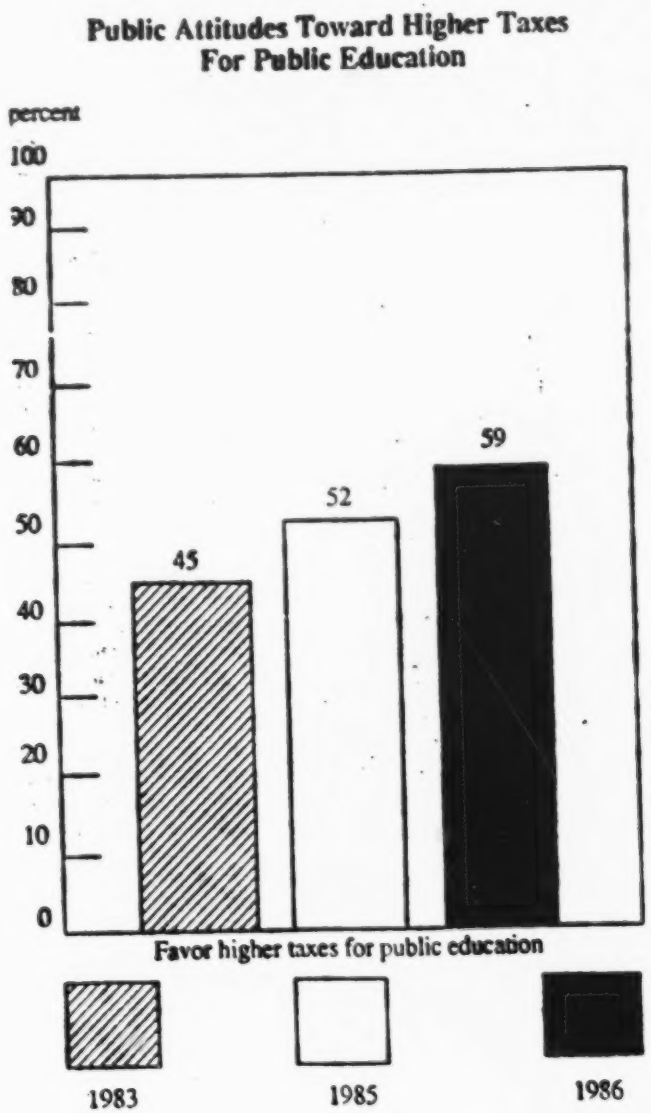
Cause and Effect: Although the occurrence of this rhetorical type in academic English has probably been overstated, there are certainly areas in the physical sciences (physics/mechanical engineering) where students need to describe causal relationships with some degree of frequency. In the social sciences, direct expessions of causality are often avoided, with more cautious statements like "X is associated with Y" substituting for "X is due to Y". Nevertheless, the concept is a basic one, and graphics depicting it can provide useful writing practice (see Figure 5).

Figure 5.


Where bumps come from
1. RAIN OR SNOW
2. FREEZING
PAVEMENT
SUB-BASE
SOIL
3. THAWING
4. BREAK-IN
HOLE

Generalizing from Numerical Data: Graphics of this type are the most readily available, being published almost daily in newspapers around the country. They provide practice in three critical cognitive tasks: (1) isolating highly significant information from a collection of statistical data; (2) describing trends and tendencies (see Figure 6); and (3) comparing groups in terms of a given variable(s). These concepts and the linguistic forms that express them are common to all academic disciplines with a quantitative research base.

Figure 6.



III. Application

Now let us turn to classroom use. We have an immediate problem of face validity when we introduce visuals into an advanced writing class. University students know that in their content courses they will be required to write about technical concepts using specialized vocabulary. They therefore may not be initially impressed with the relevance of picture stimuli, which they may associate with beginning level language instruction. These doubts can easily be put aside if we are careful to integrate information transfer activities into our ongoing writing instruction.

Whether our EAP syllabus is organized around rhetorical features, linguistic points, a genre survey of written academic English, or a combination of all three, information transfer activities are most effect when used as part of a sequence of exercises supporting the teaching points we have selected. They are less justifiable if introduced with no obvious connection to other aspects of our EAP instruction. (They shoud never be used, for example, for testing purposes unless students have had substantial practice wth them beforehand.)

Presentation of the visual stimulus to the class should be accomplished in a series of instructional moves paralleling those leading up to a writing assignment in a content course. First we assume that the instuctor uses information transfer as an integrated component of the writing course; this establishes an academic context for the practice. Second, the graphic should be discussed with the class before actual writing begins; this move corresponds to learning the information content. Finally, the clear writing task is set. This can take the form of a hypothetical content course assignment. For example, during a unit in which students are learning to write laboratory

reports, we may be focusing on the description of apparatus. We present a diagram of a heat exchange unit, for example, discuss it, and finally deliver the assignment saying, "Let's suppose that you have used this piece of equpment in your lab set-up. Please write a description of it according to the conventions we have been discussing."

During the writing phase itself, some students may be initially confused about the nature of the task. Some will want to describe the picture as a picture, as they may have done in lower level writing classes. It may be necessary to explain that what is depicted in the visual is "something you already know". The information must be described for someone who "needs to know what you know," but who does not have access to the visual itself. Other students may need help in encoding particular items, concepts or relationships shown in the graphic.

As information transfer becomes a familiar technique in the class, such conceptualization problems will disappear and writing practice will proceed in an increasingly efficient manner. Time spent in pre-writing activities will be substantially reduced since no time is needed for "choosing a topic". Less time will be needed to "talk through" the visuals. Depending on how explicitly detailed a graphic is, many of the pre-writing decisions as to what points should be brought up in developing the topic may also be eliminated.

Just as the information transfer exercise is an extension of some earlier lesson in linguistic or rhetorical features of academic writing, it should itself serve as an intermediary practice leading to eventual re-transfer back to the students' own areas of interest. Once students have practiced writing a description of a teacher-supplied topic, say, a heat exchange unit, they may be asked to apply what they have learned to the description of a typical piece of

equipment commonly used in their own fields. This increases the liklihood that the features being practiced will be adopted by students as part of their own writing repertoires. (This individualized re-contextualization, or re-transfer, practice is essential in classes with students from a variety of academic disciplines; in homogeneous classes, the teacher-provided visual should be taken directly from the students' content field. In this case no re-transfer is necessary.)

Following a planned sequence of teaching moves such as I have suggested here will serve both to legitimize the use of information transfer activities for the students and to integrate them effectively into the course of study.

IV. Conclusion

Any pedagogical decisions we make in our composition classes must be validated against the reality of the writing tasks actually encountered by students in the "real world" of their content courses. If the techniques we choose allow students to rehearse the cognitive, linguistic and rhetorical conventions common to written academic English, we may satisfy ourselves that we have made defensable choices. I have tried to demonstrate that information transfer represents such a choice, that it is an appropriate and flexible technique for practicing written academic English.

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